UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,127	07/11/2003	Gopal Dommety	50325-0779	4418

29989   7590   03/12/2008
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EXAMINER
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ART UNIT	PAPER NUMBER
2136	

MAIL DATE	DELIVERY MODE
03/12/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _19 December 2007_.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1,3-25,27-32 and 34-39_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1,3-25,27-32 and 34-39_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

1.   The office action is in replay to an amendment filed on 12/19/2007. Claims 1,3-

5,12,14,23-25,27-29,34-39 have been amended. Claims 2,26,33 are canceled. Claims 1,3-25,27-

32,34-39 are pending..

Response to Arguments

2.   Applicant's arguments with respect to claim 1,3-13,23-25,27-39 have been considered but

are moot in view of the new ground(s) of rejection.

3.   **Applicant's arguments with respect to claim 14-22 have been considered but**

argument not persuasive.

4.   **The applicant argued that the combination of Massarani-Chien-Daude fails to**

disclose "receiving a request to update the ARP table from a Dynamic Host Configuration

Protocol (DHCP) subsystem of a network device in a DHCP message that indicates a

network layer address and a corresponding data link layer address". The examiner

disagree and point out the combination of Massarani-Chien-Daude teach receiving a

request to update the ARP table from a Dynamic Host Configuration Protocol (DHCP)

subsystem of a network device in a DHCP message that indicates a network layer address

and a corresponding data link layer address(See Chien 0063-0066(i.e., DHCP message to

assist in updating the ARP table))

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

6.   Claims 1,3,6-8,10-13,23-25,27,30-32,34,37-39 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Sharma et al (hereinafter referred as Sharma) US 6,754,716 in view of

Daude et al (hereinafter referred as Daude) US Patent No 7,231,660 B1 and further in view of

Garrett et al(hereinafter referred as Garrett) US Pub No 2002/0023174 A1.

7.   As per claims 1,23-25:Sharma discloses a method/computer-readable medium/apparatus

of restricting Address Resolution Protocol (ARP) table updates to updates originating from

authorized subsystems, the method comprising: receiving an instruction to update an ARP table

(See Fig 6 step 602 and col 2 lines 39-43); determining whether the particular subsystem within

the network device from which the instruction originated is authorized (See Fig 6 step 604 and

col 3 lines 12-34,Fig 1 step 106); and only if the particular subsystem is authorized(See Fig 6

step 604 and col 3 lines 12-34), then updating the ARP table based on the instruction(See Fig 6

step 606 and col 2 lines 55-65 and col 7 lines 9-19).

        Sharma does not explicitly teach a particular subsystem of a network device comprising a

plurality of subsystems. However Daude discloses a particular subsystem of a network device

comprising a plurality of subsystems (See Fig 2 steps 201-205 and col 8 lines 50-67,col 9 lines 4-

60).

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the teaching method of Daude within Sharma method inorder to provide secure communication among multiple network devices.

The combination of Sharma and Daude do not explicitly teach wherein determining that the particular subsystem is authorized comprises determining that the particular subsystem is a Dynamic Host Configuration Protocol (DHCP) server, an authentication, authorization, accounting (AAA) server or a Network Translator(NAT);and only if the particular subsystem is authorized, then updating the ARP table based on the instruction.

However Garrett teach wherein determining that the particular subsystem is authorized comprises determining that the particular subsystem is a Dynamic Host Configuration Protocol (DHCP) server, an authentication, authorization, accounting (AAA) server or a Network Translator(NAT);and only if the particular subsystem is authorized, then updating the ARP table based on the instruction(See Fig 11 step 1101,1102,1103 and 0035,0038-0039).

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the teaching method of Garrett within the combination of Sharma and Daude method inorder to provide secure communication among multiple network devices.

8.   As per claims 3,27,34: the combination of Sharma and Daude disclose the method wherein determining authorized comprise determining whether the particular subsystem is a Dynamic Host Configuration Protocol (DCHP) server is authorized.(See See Garrett Fig 11 step 1101,1102,1103 and 0035,0038-0039).

9.   As per claims 6,30,37: the combination of Sharma and Daude disclose the method further

comprising: if the particular subsystem is not authorized, then preventing the ARP table from

being updated based on the instruction (See Sharma Fig 5 step 504)

10.   As per claims 7,31,38: the combination of Sharma and Daude disclose the method further

comprising: if the particular subsystem is not authorized, then performing the steps of:

determining whether a particular network interface through which the instruction was received

is contained in a set of one or more specified network interfaces (See Sharma col 5 line 44

through col 6 line 10 and Fig 5 steps 502, 504); if the particular network interface is contained

in the set, then preventing the ARP table from being updated based on the

instruction (See Sharma Fig 5 step 504 and col 7 line 1-9); and if the particular

network interface is not contained in the set, then updating the ARP table based

on the instruction(See Sharma Fig 5 step 504 and col 7 line 1-9).

11.   As per claims 8,32,39: the combination of Sharma and Daude disclose the method further

comprising: if the particular subsystem is not authorized, then performing the steps of:

determining whether a particular network address indicated by the instruction is contained in a

set of one or more specified network address (See Sharma col 5 line 44 through col 6 line 10

and Fig 5 steps 502, 504); if the particular network address is contained in the set, then

preventing the ARP table from being updated based on the instruction (See Sharma Fig 5 step

504 and col 7 line 1-9); and if the particular network address is not contained in the set, then

updating the ARP table based on the instruction(See Sharma Fig 5 step 504 and col 7 line 1-9).

12.   As per claims 10: the combination of Sharma and Daude disclose the method wherein the

ARP table is updated only in response to instructions that are not ARP message (See

Sharma Sharma col 3 lines 6-34).

13.   As per claim 11: the combination of Sharma and Daude disclose the method

wherein determining whether the particular system is authorized comprises determining whether

the particular subsystem is a Hypertext Transfer Protocol (HTTP) server (See Sharma col 4 lines

22-51).

14.   As per claim 12:Sharma discloses a method of restricting Address Resolution Protocol

(ARP) table updates to updates originating from authorized subsystems, the

method comprising: receiving an instruction to update an ARP table (See

Sharma Fig 6 step 602 and col 2 lines 39-43); determining whether a particular

network interface through which the instruction was received is contained in a set of one or

more specified network interfaces (See Sharma col 5 line 44 through col 6 line 10);

determining whether a particular network address indicated by the instruction is contained in a

set of one or more specified network addresses(See Sharma Fig 6 step 604 and col 3 lines 12-

34); if the particular network interface is not contained in the set of one or more specified

network interfaces, and if the particular network address indicated by the instruction is not

contained in the set of one or more specified network addresses, then updating the ARP table

based on the instruction(See Sharma col 2 lines 55-65 and col 7 lines 1-9); and

if the particular network interface is contained in the set of one or more specified

network interfaces, of if the particular network address is contained in the set of one or

more specified network addresses, then performing steps comprising: determining whether a

particular subsystem from which the instruction originated is authorized(See Sharma Fig 6 step

604 and col 3 lines 12-34); only if the particular subsystem is authorized, then updating the ARP

table based on the instruction(See Sharma col 7 lines 9-15); and if the particular subsystem is not

authorized, then preventing the ARP table from being updated based on the instruction(See

Sharma col 7 lines 1-9).

Sharma does not explicitly disclose a network device on a particular network device

among a plurality of network interfaces.

However Daude discloses a network device on a particular network device among a

plurality of network interfaces (See Daude col 8 lines 51-67 and Fig 2 steps 201-205).

Therefore it would have been obvious to a person having ordinary skill in the art at the

time the invention was made to modify the teaching method of Daude within Sharma method

inorder to provide secure communication among multiple network devices.

The combination of Sharma and Daude do not explicitly teach wherein determining that

the particular subsystem is authorized comprises determining that the particular subsystem is a

Dynamic Host Configuration Protocol (DHCP) server, an authentication, authorization,

accounting (AAA) server or a Network Translator(NAT);and only if the particular subsystem is

authorized, then updating the ARP table based on the instruction.

However Garrett teach wherein determining that the particular subsystem is authorized

comprises determining that the particular subsystem is a Dynamic Host Configuration Protocol

(DHCP) server, an authentication, authorization, accounting (AAA) server or a Network

Translator(NAT);and only if the particular subsystem is authorized, then updating the ARP table

based on the instruction(See Fig 11 step 1101,1102,1103 and 0035,0038-0039).

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the teaching method of Garrett within the combination of Sharma and Daude method inorder to provide secure communication among multiple network devices.

15.   As per claim 13: the combination of Sharman and Daude disclose wherein receiving the instruction to update the ARP table comprises receiving and ARP message that indicates an association between a network layer address and a data link layer address. (See Sharma Fig 2 step 200 and Fig 6 step 606)

16.   **Claims 4-5,28-29,35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma et al (hereinafter referred as Sharma) US 6,754,716 in view of Daude et al (hereinafter referred as Daude) US Patent No 7,231,660 B1 and further in view of Garrett et al(hereinafter referred as Garrett) US Pub No 2002/0023174 and further in view of Wilson (US Pub No 2001/0054101).**

17.   As per claims 4,28,35: the combination of Sharma-Daude-Garrett discloses claim 1 as recited above. Sharma-Daude-Garrett do not disclose the method wherein determining whether the particular system is authorized comprises determining whether the particular subsystem is NAT server.

However Wilson teaches the method wherein determining whether the particular system is authorized comprises determining whether the particular subsystem is NAT server. (See 0007 Fig 3 steps 314,316)

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the method disclosed by Sharma-Daude-Garrett to

include determining whether the particular system is authorized comprises determining whether the particular subsystem is NAT server.

This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so, as suggested by (See col 3 lines 16-19) inorder to restrict communications between network devices on common subnet such as any network devices can be restricted to communicating only with a predefined set of authorized of validated network devices.

18.   As per claims 5,29,36: the combination of Sharma-Daude-Garrett disclose claim 1 as recited above. Sharma-Daude-Garrett do not disclose the method wherein determining whether the particular system is authorized comprises determining whether the particular subsystem is an authentication authorization accounting (AAA) server.

However Wilson teaches determining whether the particular system is authorized comprises determining whether the particular subsystem is an authentication authorization accounting (AAA) server (See 0007 Fig 3 steps 314,316)

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the method disclosed by Sharma and Daude to include a Dynamic Host Configuration Protocol Server, an Authentication, and Authorization, Accounting (AAA) server or a Network Address Translator (NAT).

This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so, as suggested by Sharma (See col 1 line 66 through col 2 line 3) inorder to restrict communications between network devices on common subnet such as

any network devices can be restricted to communicating only with a predefined set of authorized of validated network devices.

19.   **Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma et al (hereinafter referred as Sharma) US 6,754,716 in view of Daude et al (hereinafter referred as Daude) US Patent No 7,231,660 B1 and further in view of Garrett et al(hereinafter referred as Garrett) US Pub No 2002/0023174 A1 and in further view of Massarani (US 6,393,484 B1).**

20.   As per claim 9: the combination of Sharma-Daude-Garrett disclose claim 1 as recited above. The combination of Sharma-Daude-Garrett do not disclose the method comprising determining whether a specified amount of time has passed since a time indicated by a timestamp associated with an entry in the ARP table; and if the specified amount of time has passed then removing the entry from the ARP table.

However Massarani teaches the method comprising determining whether a specified amount of time has passed since a time indicated by a timestamp associated with an entry in the ARP table (See abstract and See Fig 7 steps 701); and if the specified amount of time has passed then removing the entry from the ARP table (See abstract and See Fig 7 steps 701).

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the method disclosed by Sharma-Daude-Garrett to include determining whether a specified amount of time has passed since a time indicated by a timestamp associated with an entry in the ARP table; and if the specified amount of time has passed then removing the entry from the ARP table.

This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so, as suggested by Massarani (See col 3 lines 16-19) inorder to prevent unauthorized devices and users from obtaining network services in a dynamic user address environment.

21.   **Claims 14-22 are rejected under 35 U.S.C. 103(a) as being unpatentable Massarani (hereinafter referred as Massarani) US 6,393,484 B1 in view of Chien et al(hereinafter referred as Chien(US Pub No 20030115345) and further in view of Daude et al (hereinafter referred as Daude) US Patent No 7,231,660 B1 .**

22.   As per claim 14: Massarani discloses the method of sending an instruction to update an Address Resolution Protocol (ARP) table in a system in which ARP table updates are restricted to updates originating from authorized subsystems, the method comprising: in response to receiving the message, determining whether the network layer address is bound with a data link layer address in the ARP table (See Fig 3 step 310 and col 5 lines 31-54); and only (See Fig 3 step 310 and col 5 lines 31-54); and if the network layer address is not bound with a data link layer address, then sending an instruction to update an ARP table(See Fig 4 step 416 and col 5 lines 31-54)

Massarani does not explicitly teach receiving a request to update the ARP table from a Dynamic Host Configuration Protocol (DHCP) in a DHCP subsystem of network device in a DHCP message that indicates a network layer address and corresponding data link layer address (See Fig 3 step 308 and col 5 lines 31-54);

However Chien teaches receiving a request to update the ARP table from a Dynamic Host Configuration Protocol (DHCP) in a DHCP message that indicates a network layer address (See paragraph 0063-0066)

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the method disclosed by Massarani to include receiving a request to update the ARP table from a Dynamic Host configuration Protoclol(DHCP) in a DHCP message that indicates a network layer address.

This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so, as suggested by Massarani (See col 3 lines 16-19) inorder to prevent unauthorized devices and users from obtaining network services in a dynamic user address environment.

The combination of Massarani and Chien do not disclose subsystem of a network device comprising a plurality of subsystems.

However Daude discloses subsystem of a network device in a DHCP message (See Fig 2 steps 201-205 and col 8 lines 50-67,col 9 lines 4-60).

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the teaching method of Daude within the combination of Massarani and Chien inorder to provide secure communication among multiple network devices.

23.   As per claim 15: the combinations of Massarani-Chien-Daude disclose the method wherein the instruction is to update the ARP table to contain a binding between the network layer address and data link layer address of a DHCP client that sent the message (Massarani col 5 lines 31-54)

24.   As per claim 16: the combinations of Massarani-Chien-Daude disclose the method

comprising determining whether a lease associated with the network layer address has expired

(See Massarani col 7 lines 27-37); and if the lease has expired, then sending an instruction to

update the ARP table (See abstract).

25.   As per claim 17: the combinations of Massarani-Chien-Daude disclose the method

determining whether a lease associated with the network layer address has expired (See

Massarani col 7 lines 27-37); and if the lease has expired, then sending an instruction to remove,

from the ARP table, an entry that contains the network layer address (See Massarani col 7 lines

27-37).

26.   As per claim18: the combinations of Massarani-Chien-Daude disclose the method

comprising receiving a particular DHCP message requests an extension of a lease (See

Massarani abstract); and response to receiving the particular DHCP message, sending an

instruction to update the ARP table (See Massarani abstract).

27.   As per claim 19: the combinations of Massarani-Chien-Daude disclose the method

comprising receiving a particular DHCP message that relinquishes a lease (See abstract); and in

response to receiving the particular DHCP message, sending an instruction to update the ARP

table (See Massarani abstract).

28.   As per claim 20: the combinations of Massarani-Chien-Daude disclose the method

comprising if the network layer address is not bound with a data link layer address, then sending

an instruction to start a process in connection with the network layer address (See Massarani col

5 lines 25-54).

29.   As per claim 21: the combinations of Massarani-Chien-Daude disclose the method

comprising determining whether a lease associated with the network layer address has expired

(See Massarani Fig 6 step 603); and if the lease has expired, then sending an instruction to stop a

process in connection with the network layer address (See Massarani Fig 6 step 603 and col 7

lines 9-23).

30.   As per claim 22: the combinations of Massarani-Chien-Daude disclose the method

comprising receiving a particular DHCP message that relinquishes a lease (See Massarani Fig 6

step 601); and in response to receiving the particular DHCP message, sending an instruction to

stop a process in connection with the network layer address (See Massarani Fig 7 step 704 and

col 7 lines 9-23).

Conclusion

31.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

        A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fikremariam Yalew whose telephone number is 5712723852. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Moazzami Nasser can be reached on 571-272-4195. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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